兩種黑尾浮塵子成蟲之識別

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黑尾浮塵子在稻作栽培區域，不論水稻或陸稻上均有其踪跡；因個體發生甚多，被視爲稻作主要害蟲。此蟲往往在同一地區兩種同時發生，體軀色澤亦頗多變異而相類似。過去臺灣有關此蟲之研究，均被認爲僅一種，學名亦甚混亂；然所發生者，則包含有僞黑尾浮塵子 *Nephotettix cincticeps* (Uhler) 及黑尾浮塵子 *Nephotettix apicalis apicalis* (Motschulsky). 筆者曾就雌雄性成虫之形態略作比較，不但雄性生殖節之形態特徵差異頗爲顯著，卽就雌性生殖節亦甚易分辨。謹就 *Nephotettix* 屬已知種類，分佈及所觀察二種黑尾浮塵子形態之結果，特爲錄出及記述，以供同道之參考。

黑尾浮塵子之分類，卽在國外過去亦頗爲混亂。Metcalf (1955) 認爲 *bipunctatus* 及 *cincticeps* 係 *apicalis* 之同物異名 (synonymy)。自 Linnavuori (1956，1960) 就其雄性生殖節形態詳加研究，而確定 *apicalis* 及 *cincticeps* 均爲獨立種。奈須 (1958) 及岸本 (1959) 分別就此兩種浮塵子之卵、若蟲及雄性生殖節之生態及形態等作詳細研究比較。Linnavuori (1960) 並發表黑尾浮塵子一新亞種。以上諸學者均係依據雄虫生殖節研究之結果，迄未就雌性成虫詳加研究比較。

Check list of genus *Nephotettix* Matsumura

Nephotettix Matsumura 1902 Term. Füzetek 25:378. (type: *Selenocephalus cincticeps* Uhler; Japan).

apicalis apicalis (Motschulsky), 1858.

Pediopsis apicalis Motschulsky 1858 Etudes Ent., 7:110.

Pediopsis nigromaculatus Motschulsky 1858 Etudes Ent., 7:111.

Thamnotetix nigropicta Stal 1870 Ofv. K. Vet.-Akad., Forh. 27:740.

Nephotettix apicalis, Melichar 1903 Homopt.-Fauna Ceylon, :193.

Nephotettix bipunctatus Metcalf 1946 Insects of Cuam II, B. P. Bishop Mus. Bull. 189:126., figh., nec Fabricius 1803 Syst. Rhyng., :78.

Nephotettix apicalis, Metcalf 1955 J. Wash. Acad. sci. 45:265 (=*bipunctatus* Fabricius, *cincticeps* Uhler).

Nephotettix apicalis apicalis, Linnavuori 1960 Insects of Micronesia 6:314, figs.

Distribution: Japan, China, S. Asia, E. Indies, W. Micronesia, N. Australia, Polestine, Africa.

apicalis yapicola Linnvuori, 1960.

Nephotettix apicalis yapicola Linnvuori 1960 Insects of Micronesia, 6:315, fig.

Distribution: Caroline Isl. (Palau, Yap).

bipunctatus (Fabricius), 1803.

Cicada bipunctatus Fabricius 1803 Syst. Rhyng., :78.

Thamnotettix bipunctatus. Stal 1869 Hem. Fabr., 2:82.

Nephotettix bipunctatus, Matsumura 1902 Teramesz. Füzetek, 25:379.

Distribution: India.

cincticeps (Uhler), 1896.

Selenocephalus cincticeps Uhler 1896 Proc. U. S. nat. Mus., 19:292.

Nephotettix cincticeps, Matsumura 1902 Termesz. Füzetk, 25:379-380.

Nerphotettix apicalis cincticeps, Matsumura 1905 Thous. Ins. Jap., 2:66-67.

Nephotettix bipunctaius cincticeps, Esaki et Hashimoto 1932 Kyushu Imp. Univ. Agric. Rep. Leaf-hoppers Inj. Rice-plant, 3:4.

Nephotettix cincticeps, Linnavuori 1956 Ann. Ent. Fenn., 22:136.

Distribution: Japan, S. China, Taiwan.

condemptus Kirkaldy, 1906.

Nephotettix contemptus Kirkaldy 1906 Hawaiian Sug. Pl. Assoc. Exper. Sta., Ent. Bull., 1:332.

Distribution: Australia (N. S. Wales).

eurytus Kirkaldy, 1907.

Nephotettix eurytus Kirkaldy 1907 Hawaiian Sug. Pl. Assoc. Exper. Sta., Ent. Bull. 3:54.

Distribution: Australia (N. S. Wales).

molulatus Melichar, 1914.

Nephotettix molulatus Melichar 1914 Ergeb. zweit. deutsch. Zentral-Afr. Exped., 1:115.

Distribution: Belgian Congo.

plebeius Kirkaldy: 1906.

Nephotettix plebeius Kirkaldy 1906 Hawaiian Sug. Pl. Assoc. Exper. Sta., Ent. Bull. 1:331.

Distribution: Australia (Oueensland).

兩種黑尾浮塵子成蟲之比較

僞黑尾浮塵子 *Nephotettix cincticeps* (Uhler), 1896.

(參閱圖A—F)

成蟲：雌雄色澤均有變異，一般綠色較淡；少數雄蟲翅端呈黑色及具有黑色翅斑（翅中央），頗與黑尾浮塵子之翅斑相類似。頭之背面觀，前緣中央略突出。

雌蟲：第八腹片後緣中央突出，亞後緣中央具有兩條短而斜之隆起。產卵管鞘略細長，末端呈尖銳。產卵管末端尖銳。

雄虫：下性片 (subgenital plate) 較狹長。 夾片 (stylus) 末端與中部等寬，顯較基片爲短。陽莖 (aedeagus) 粗短，內側緣中央僅具 3 長刺。

黑尾浮塵子 *Nephotettix apicalis apicalis* (Motschulsky), 1858.

(參閱圖G—L)

成蟲： 雌雄色澤較僞黑尾浮塵濃豔，但亦頗多變異，翅斑有時漸漸消失，翅端黑色亦有變爲甚淡者；頗似僞黑尾浮塵子。頭之背面觀，前緣圓形。

雌蟲： 第八腹片後緣中央凹入；後中央有一光滑縱行稍寬隆起。產卵外鞘末端略鈍，內側有一細縱溝。產卵管末端略鈍。

雄蟲： 下性片短寬。夾片末端狹尖，其長度幾與基片相等。陽莖較長而頂部略狹；內側緣中央約具長刺5及短刺3。

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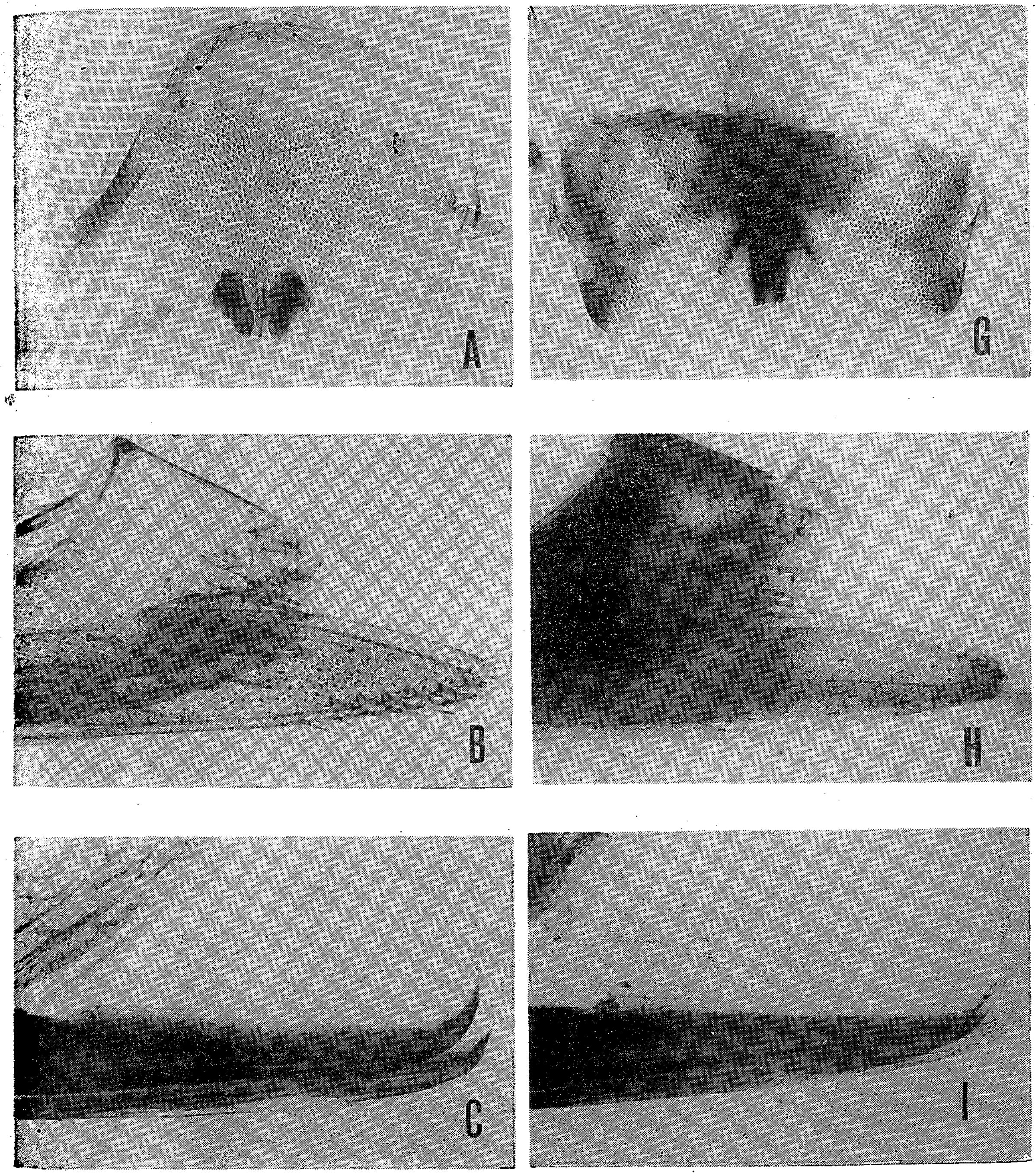
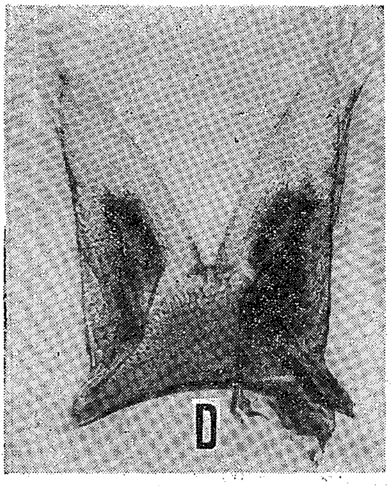
圖 片 說 明

黑尾浮塵子之生殖節；(A,G) ♀第八腹片；(B,H) 產卵管外鞘、側面觀；(C,I)產卵管，側面觀；(D,J) ♂下性片，腹面觀；(E,K) 夾片；陽莖，(F,L) 側面觀。A–F 偽黑尾浮塵子 *Nephotettix cincticeps* (Uhler)；G–L黑尾浮塵子 *N. apicalis apicalis* (Motschulsky)。

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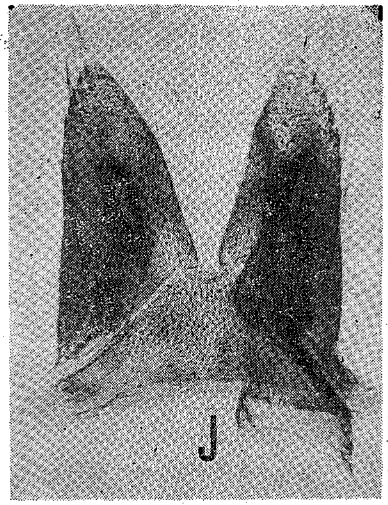
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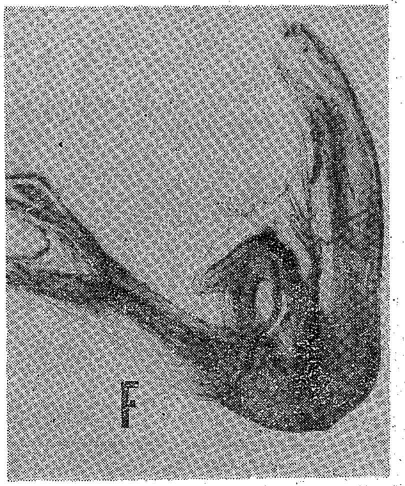
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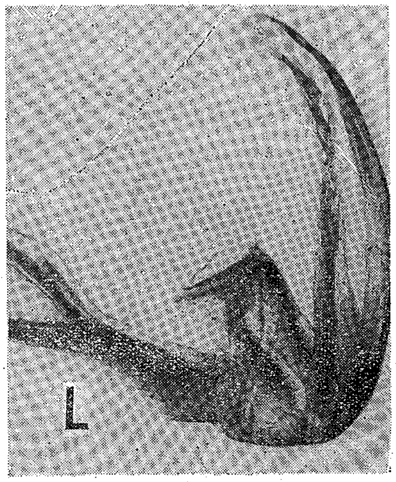
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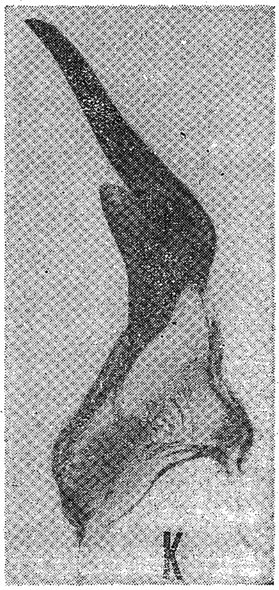
K